



Scatter plots: Year Level vs. Concentration time

How to: Get a Random Sample from CensusAtSchool

Go to the CensusAtSchool [Random Sampler](#) to download a sample.X

Reference year: *(select year)* **Sample size:** *at least 30 students*

Select questions: *Year level, Concentration Game*

Location: *Select Location* **Year level:** *All*

To protect privacy there is a rule built into the sampler that the requested sample size cannot exceed 10% entered.



This task is designed to be completed by hand drawing a scatterplot. It can also be completed using Excel or CAS calculator.

Task:

- Using your CensusAtSchool random sample, enter both sets of thirty numbers as:
 - ✓ a table in your workbook, or
 - ✓ two columns in Excel, or
 - ✓ two separate lists in your CAS calculator.
- Create a scatter plot with your data.
 - Think about which set of data is the independent and dependent variable,
 - Plan your axes to include the highest and lowest values in the data and
 - Include a title that includes the variable names.
- Look at your graph. Can you see any trend or pattern to the data?
Complete this sentence:

As school year level _____, concentration time _____.

Extension:

- On your scatterplot draw a line of best fit by eye. Remember to consider the slope and the position of this line.



5. Use the line to complete the following sentence: Each time the school year level increases by 1 year, concentration time _____ by _____ seconds.

6. Explain what this means in a sentence using your own words